DOCUMENT RESUME

ED 446 798 JC 000 737

TITLE	@ONE Summary Report, 2000: Faculty Instructional Technology Survey Results.
INSTITUTION	De Anza Coll., Cupertino, CA.
PUB DATE	2000-05-00
NOTE	32p.
CONTRACT	CCC-96-0490
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Community Colleges; *Educational Needs; *Educational Technology; *Teacher Response; Teacher Surveys; Two Year Colleges
IDENTIFIERS	*California Community Colleges

ABSTRACT

Summarizes the results of the recent statewide @ONE Instructional Technology Survey of full- and part-time faculty at California Community Colleges and highlights policy implications based on the data collected. The @ONE project is funded by the Chancellor's office to enhance instruction and services through expanded uses of technology. Results suggest that faculty continue to have positive attitudes regarding the potential for technology to improve instruction and that they are interested in learning how to use technology to reach instructional goals that benefit students. Faculty use of technology is increasing in a number of areas, especially in the use of the Internet and email. Skills are improving, but data still indicate a need for ongoing training in uses of technology that reflect best practice. Almost half of the responding faculty reported that their departments do not have an adequate budget to purchase needed software. The changing workload of faculty, new roles necessary to support technology mediated instruction, and sufficient infrastructure must be addressed before the California Community Colleges and their students will reap the benefits of technological advances. The survey results point to local training as being most desirable and effective. Strategies to reach and support part-time faculty must be a priority. There must be comprehensive, ongoing funding for technology in the colleges. Appendices include the survey instrument used in this study. (VWC)

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@ONE

SUMMARY REPORT 2000

California Community College

Faculty Instructional Technology

Survey Results

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California Community College
Faculty Instructional Technology
Survey Results

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May, 2000

The @ONE Project is funded by the Technology and Telecommunications Program of the California Community Colleges Chancellor's Office, Grant # 96-0490.

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Acknowledgements

The project staff and team would like to thank the campus contacts at each of the participating institutions who aided in the survey implementation.

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Introduction

The @ONE project is funded by the California Community Colleges' Chancellor's Office to enhance instruction and services through expanded uses of technology in the colleges.
In 1998, the project team conducted a statewide needs assessment designed to identify instructional technology training needs and institutional impediments to the integration of technology into instruction. The resulting report influenced both training and services offered by @ONE as well as the Technology Plan II for the California Community Colleges.

The @ONE Instructional Technology Survey, conducted February, 2000, was a follow up to the first survey to determine:

- The extent to which instructional technology use and skill has increased,
- Whether impediments to integrating technology into instruction have decreased, and
- Specific technology training needs that faculty have.

The purpose of this report is to summarize the results of the recent statewide survey of full-time and part-time faculty and highlight policy implications based on the data collected.

Executive Summary

The @ONE needs assessment team realized from early interviews and focus groups in 1997 that in order for the colleges to be successful in maximizing the potential that technology offers education, there must be receptive faculty attitudes, appropriate skills and knowledge, and sufficient institutional support systems.

Findings 2000

Survey findings indicate that faculty continue to have positive attitudes regarding the potential for technology to improve instruction and that they are interested in learning how to use technology to reach instructional goals that benefit students. Faculty use of technology is increasing in a number of areas, especially in the use of the Internet and email. Skills are improving, but data still indicate a need for ongoing training in uses of technology that reflect best practice.

Though we see significant improvements in faculty and student access to technology and improvement in other institutional structures such as technical support, the California Community Colleges still have far to go to support faculty and students. Almost half of the responding faculty reported that there are not sufficient numbers of computers in labs and classrooms to meet student needs. Over half report that their departments do not have an adequate budget to purchase needed software. Few faculty are compensated for time spent in incorporating technology into instruction and most don't

have pedagogical support from instructional designers or technologists, or sufficient technical support. There appear to be few incentives and not enough assistance for faculty to do the research, development, implementation and evaluation, which is needed for successful technology enhanced curriculum. Part-time faculty consistently "don't know" about the support that may exist on campus. Results suggest that currently California Community Colleges cannot support widespread integration of technology mediated instruction.

Faculty indicate specific interest in training that helps them to incorporate technology into curriculum, though the training that is most available is office applications. Faculty most prefer live, hands-on training that includes development of a product such as an instructional web site or instructional unit. Online training and training via videoconference remain low preferences for faculty at 15% and 6% respectively. Both of these delivery options would allow for central statewide delivery to large numbers, a highly scalable approach to training. However, the data suggests that supporting local structures for training delivery would be most effective in reaching the most faculty, since they also prefer training in short sessions of a few hours over a period of time. As well, we learned in 1998 that they don't want to travel to attend training.

Policy Implications

The @ONE Instructional Technology Survey, 2000, points to a number of issues with which campuses have been struggling and these have implications for public policy. The changing workload of faculty, new roles necessary to support technology mediated instruction, and sufficient infrastructure must be addressed before the California Community Colleges and their students will reap the benefits of technological advances.

The survey results point to local training as being most desirable and effective. Many of the training topics of highest interest to faculty are those in which @ONE has developed training materials based on the 1998 survey results. However, since these materials were developed for use by the colleges locally, technology training structures and assistance need to be in place at the district/campus level in order to take advantage of them. There should be some central system support for the new personnel filling positions that support faculty and staff in the integration of technology into instruction and services — so that they can optimize productivity by sharing resources and materials. In addition, administrations need to recognize that one person cannot fill all the roles associated with pedagogical and technical support for faculty and staff on a campus.

Part-time faculty who deliver 30%-40% of the instructional hours in many colleges seem to be out of the loop regarding technology training opportunities and support structures available. Strategies to reach and support part-time faculty must be a priority if students are to benefit universally.

In order to realize the full potential that technology offers the community colleges, we must have comprehensive, ongoing funding for technology in the colleges so that colleges can provide on-going technical and pedagogical support for integrating technology into instruction and services. This on-going funding should cover:

- Personnel to assist in the design, development, and delivery of technology enhanced instruction, e.g., instructional designer, instructional technologist, student technical support.
- Technical support staff to manage and develop the technical infrastructure, e.g., Web master, network managers, computer laboratory coordinators, computer repair/ maintenance technicians, help desk staff.
- Training on effective strategies for using technology in instruction and support for both full time and part time faculty participation in training. Professional staff to develop and deliver faculty training. Strategies to support technology mentors in instructional departments to aid faculty in discipline-specific applications.
- Strategies that ensure all students acquire the skills needed to complete computer-based course assignments and strategies that provide all students with easy access to computers and the Internet to complete course work.
- Providing current hardware and software for faculty and departments, as well as email accounts and Internet access for faculty.

Finally, because about half of the CCC faculty are over 50 years old, attention should be paid to suggested hiring criteria that include competencies in technology and new hire training programs that include instructional technology and pedagogy.

Methodology

Survey Development

The 1998 Faculty Instructional Technology Survey was the basis for the year 2000 survey. Changes were made to clarify the few items that had caused confusion, to simplify the format and to cut or combine items to reduce the length of the survey. The current survey instrument is in Appendix A.

Survey Sample

The same sample of colleges used for the 1998 @ONE survey was used for the 2000 survey. In 1998, twenty-one community colleges (approximately 20% of California Community Colleges) were selected to participate in the survey. The ten consortium colleges were included plus eleven others in order to balance characteristics of size, student demographics, geographic location and rural, urban and suburban designations. This balance was based on the Chancellor's Office Research Unit's matrix of California Community Colleges distributed according to several of these characteristics.

For the 2000 survey, faculty in the same colleges were surveyed in order to monitor changes in use and attitudes regarding access to, and support for, technology. Twenty colleges out of the original twenty-one colleges were able to participate. A new faculty sample at each of the colleges was chosen by using the Winter/Spring 2000 schedule of classes, and by selecting every 10th class section after starting randomly between 1 and 10. *This stratified systematic random sample* produced a faculty sample that included all disciplines, day and night faculty, and full- and part-timers. This sample constituted half of the FTE faculty in these colleges, and mirrored the FTE distribution of faculty (61% full-time and 39% part-time), since the chance of selection was based on the number of sections taught.

The demographics of the respondents are very close to the Chancellor's Office data on faculty demographics from the Report on Staffing and Salaries, Fall 1998 (latest data available). The gender is within 1%, ethnicity is within 2%, and age varies between 1-4% in each of the three categories. See the summary data on faculty demographics.

Response Rate

A total of 2,771 surveys were distributed and 1,149 were returned, for a response rate of 41 percent. In terms of FTE, responses from full-timers were 21% of full-time FTE, and responses from part-timers were 19% of part-time FTE. It is possible that those who responded are faculty who have more interest in technology than those who did not respond.

Survey Implementation

A designated contact on each campus distributed surveys and follow-up reminders. Survey respondents returned completed surveys to the contact, who then returned the surveys to the @ONE staff.

Summary Data

Demographics of Survey Sample

@ONE Instructional Technology Survey

The demographics of the respondents of the survey , year 2000, are very close to the demographics of faculty in the system as per the latest data available from the Chancellor's Office Accountability Unit, Policy Analysis and Management Information Services Division, which is the Report on Staffing and Salaries, Fall 1998. In addition, the demographics of this year 2000 survey sample are about the same as the demographics of the sample in the 1998 @ONE Faculty Instructional Technology Survey.

Gender

The @ONE survey sample had relatively the same percentages of male and female respondents as is represented in the Chancellors office statewide data. The *composite* of both full-time and part-time faculty was 49% female and 51% male. Part-time and full-time faculty were separated for analysis below because the COCCC data is separated and we wished to make comparisons.

Gender of Full-time Faculty in Survey Sample and Statewide

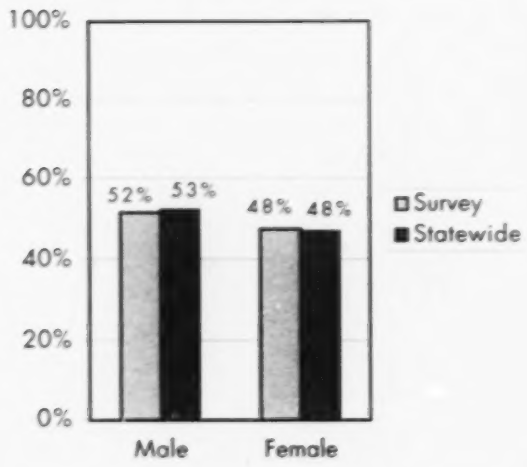


Figure 1b. Gender of part-time faculty in the survey sample compared with latest Chancellor's Office statistics.

Gender of Part-time Faculty in Survey Sample and Statewide

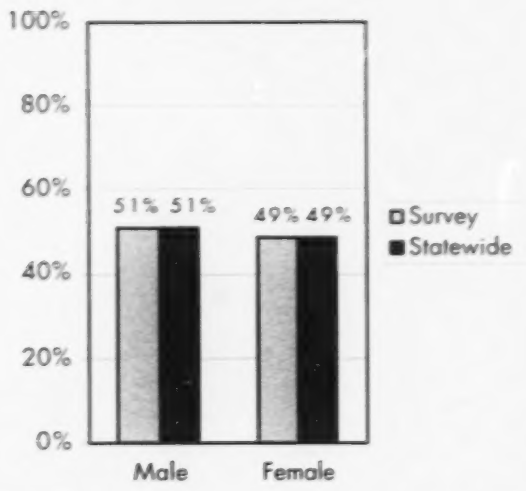


Figure 1a. Gender of full-time faculty in the survey sample compared with latest Chancellor's Office statistics.

Age

In age, both the full-time and part-time faculty percentages in the @ONE survey sample were very similar to statewide demographics. Below the survey sample is shown in comparison to the full-time and part-time statistics generated by the Chancellor's Office.

The *composite* of both full and part-time faculty in the survey sample was 8% under 35 years old, 43% between 36 and 50 years old, and 49% over 50 years old.

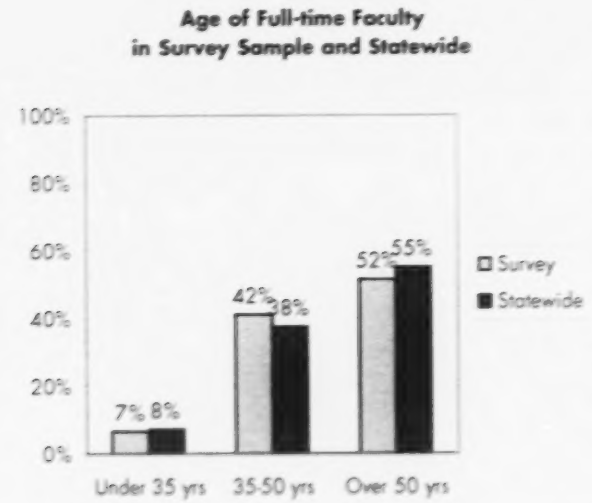


Figure 2a. Age of full-time faculty in survey sample compared with latest Chancellor's Office statistics for the state.

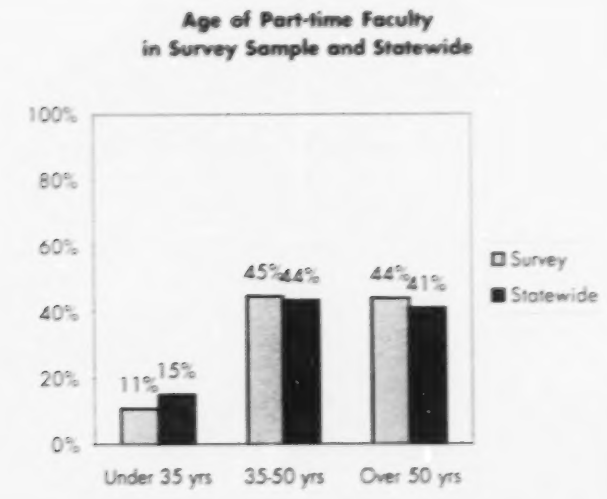


Figure 2b. Age of part-time faculty in survey sample compared with latest Chancellor's Office statistics for the state.

Ethnicity

The ethnic diversity of the survey sample compared to the Chancellor's Office statistics regarding ethnicity is almost the same. The @ONE sample had 2% less white, full-time faculty respond. The @ONE survey allowed for faculty to choose "other" as an option and the Chancellor's Office staffing data did not have that category.

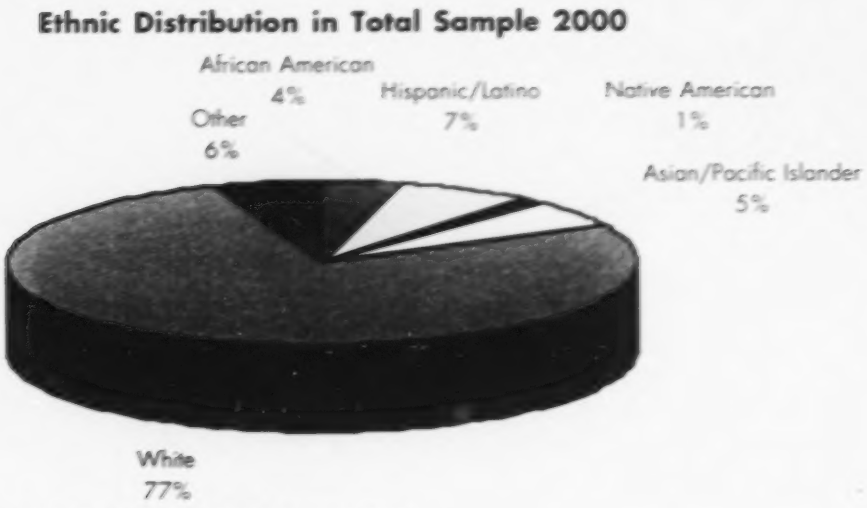


Figure 3. Ethnicity of faculty in survey sample.

Full-Time, Part-Time Status

The breakdown of full-time and part-time faculty in the survey sample closely reflects the percentage of instructional hours taught by each group, rather than the number of faculty in the system.

Figure 4. Percent of full-time and part-time faculty in the survey sample.

Disciplines and Technology

When we looked at whether faculty in specific disciplines could be characterized as more positive about technology, or more interested in training, we compared the discipline data for two survey items. The first was in the Faculty Attitudes section: "To what extent do you think that technology will improve teaching and learning in higher education?" Those disciplines whose members responded much/very much at a rate over 80% are: Business and Computer Applications, Counseling (the highest at 89%), Foreign Language, Physical Education and Vocational Studies.

The second item was regarding training interests: "I would be interested in attending training on how to incorporate technology into curriculum for improved student outcomes." The disciplines responding positively at 80% or above were: Applied Technology, Basic Skills/ESL, Biology & Health, Business and Computer Applications, Counseling (again the highest at 88%), Foreign Languages and Language Arts. Thirty-four percent (34%) of Creative Arts faculty were NOT interested in attending such a training. Math and Computer Science (24%) and Physical Sciences (22%) were the next highest groups responding "no" to interest in training in incorporating technology into curriculum for improved student outcomes. It is possible that some faculty in these groups would prefer to teach themselves, or don't believe effective training exists to meet their needs. Some of the "no" responses may indicate disinterest in any technology training for instruction.

See the survey instrument, Appendix C, for the list of disciplines that were options.

Home Access

It is of interest to @ONE and the colleges that, 93% of faculty respondents own a computer with Internet access or intend to buy one.

Faculty Attitudes Regarding Technology

As seen in the chart below, faculty attitudes about the potential for technology to improve instruction are positive. This finding is consistent with what we learned in 1998. In fact, for survey items which were the same, the responses were about the same. To varying degrees 98% of faculty think that the use of technology will improve teaching and learning in higher education and that technology will allow community colleges to reach more students. For other items, when somewhat responses are combined with the much/very much responses, the results are over 89% faculty felt positively about the impact of technology on instruction.

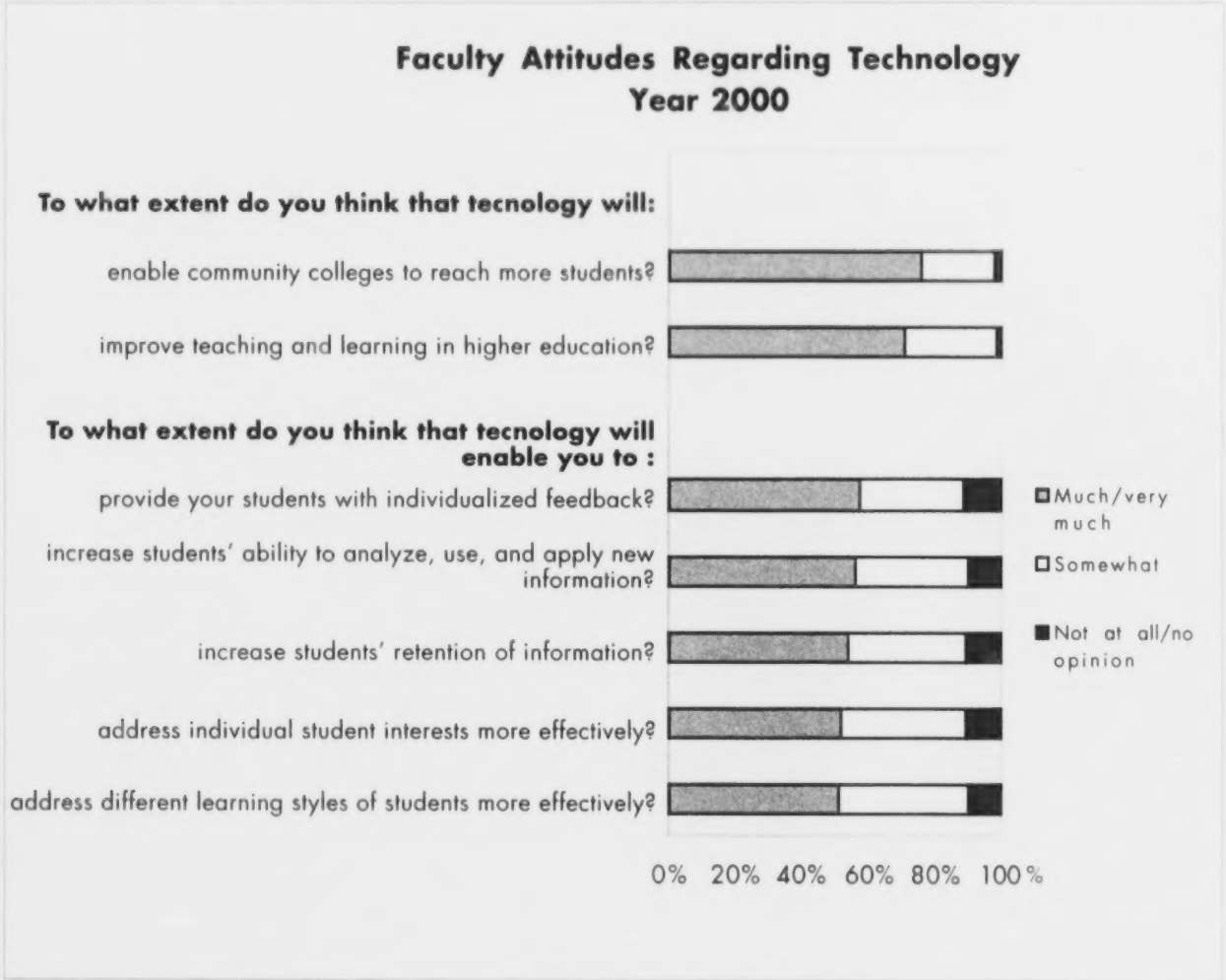

Faculty Attitudes Regarding Technology
Year 2000
To what extent do you think that tecnology will:
enable community colleges to reach more students?
improve teaching and learning in higher education?
To what extent do you think that tecnology will enable you to :
provide your students with individualized feedback?
increase students' ability to analyze, use, and apply new information?
increase students' retention of information?
address individual student interests more effectively?
address different learning styles of students more effectively?
Much/very much
Somewhat
Not at all/no opinion
0% 20% 40% 60% 80% 100%

Figure 5: Faculty perceptions of the impact of technology in descending order of percent of faculty rating much, or very much.

Faculty Appraisal of Access and Institutional Support

The results indicate that access to computers has improved for both faculty and students in the last two years, with the most significant advances (22 percentage points) in computers in faculty offices. Though responses regarding student access show significant improvement, almost half of the faculty respondents still do not think that student access is sufficient to meet the needs.

Progress in support structures on the campuses is being made to a lesser degree. Higher numbers of faculty still indicate that support and incentives are NOT in place than indicate that they are. Lack of technical support for faculty, lack of pedagogical support and time or compensation may impede the integration of technology into instruction at many campuses.

The 2000 survey data indicates that a fairly large percentage of faculty, especially part-time faculty, are not informed of support which may be in place at the campuses (a range of 11%-34% responded "don't know"). See the table on Access and Support in Appendix A for detail.

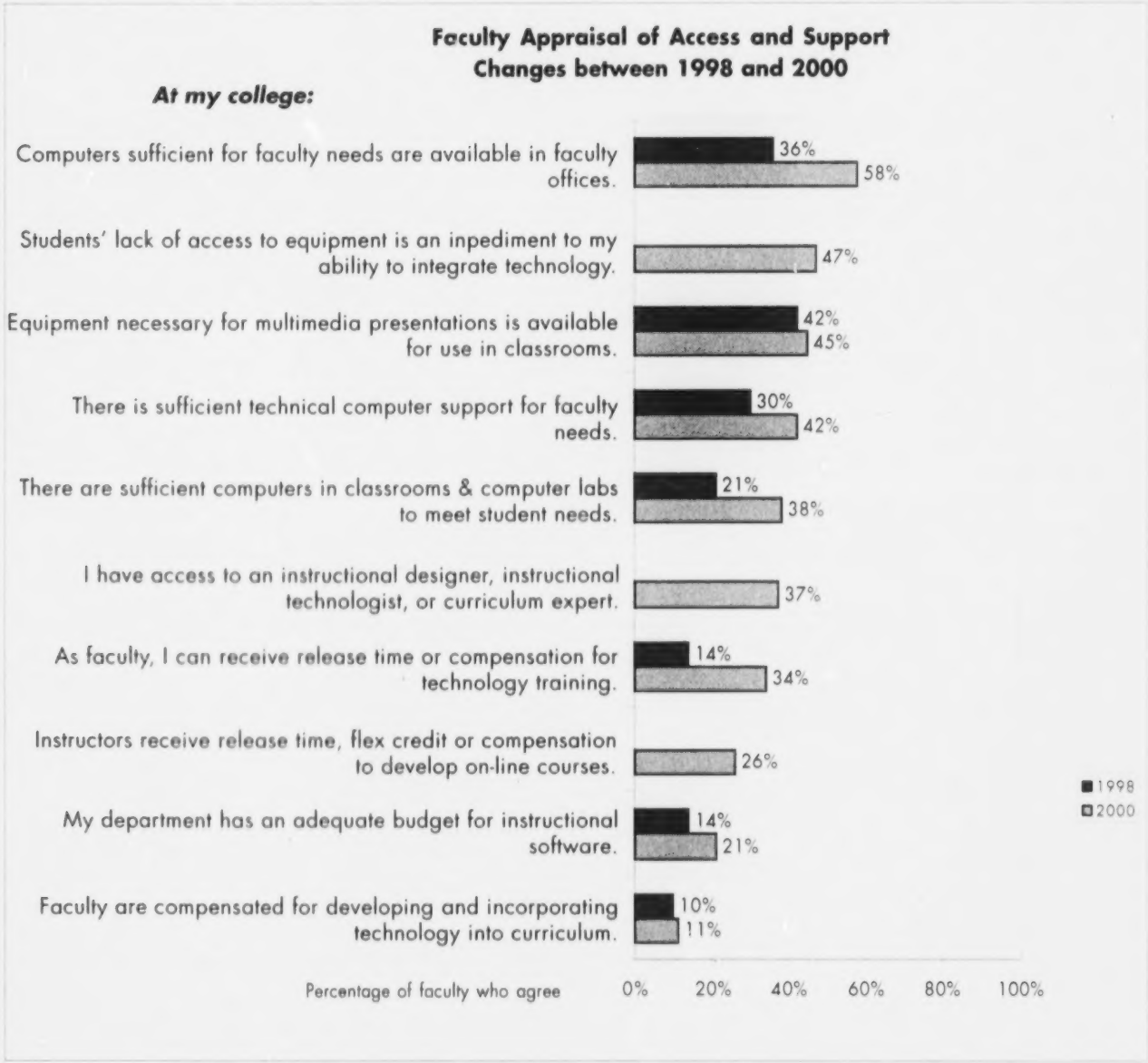

Faculty Appraisal of Access and Support
Changes between 1998 and 2000
At my college:
Computers sufficient for faculty needs are available in faculty offices.
36%
58%
Students' lack of access to equipment is an inpediment to my ability to integrate technology.
47%
Equipment necessary for multimedia presentations is available for use in classrooms.
42%
45%
There is sufficient technical computer support for faculty needs.
30%
42%
There are sufficient computers in classrooms & computer labs to meet student needs.
21%
38%
I have access to an instructional designer, instructional technologist, or curriculum expert.
37%
As faculty, I can receive release time or compensation for technology training.
14%
34%
Instructors receive release time, flex credit or compensation to develop on-line courses.
26%
My department has an adequate budget for instructional software.
14%
21%
Faculty are compensated for developing and incorporating technology into curriculum.
10%
11%
1998
2000
Percentage of faculty who agree
0%
20%
40%
60%
80%
100%

Figure 6. Comparison of the survey responses in the 1998 and 2000 surveys regarding faculty appraisal for support structures on the campuses. Bar includes percent of faculty that responded agree or somewhat agree. Three items were new to the 2000 survey.

Faculty Use of Technology

Faculty use of technology has increased since 1998, especially in the use of the Internet and email. Faculty continue to use technology most for communicating with colleagues (76%) and for locating websites of interest to students (62%). Using email for communication with students increased from 30% to 55%, though only 14% encourage students to use email for group work. This may indicate a concern for lack of student access or faculty lack of awareness of the usefulness of email in collaborative learning. We learned in the 1998 survey that faculty perceptions of the importance of a technology application to instruction is a higher indicator of use than skill level is.

Maintaining a web site to support a class has increased only slightly from 10% to 16%, and teaching an online class did not increase significantly, from 2% to 5%.

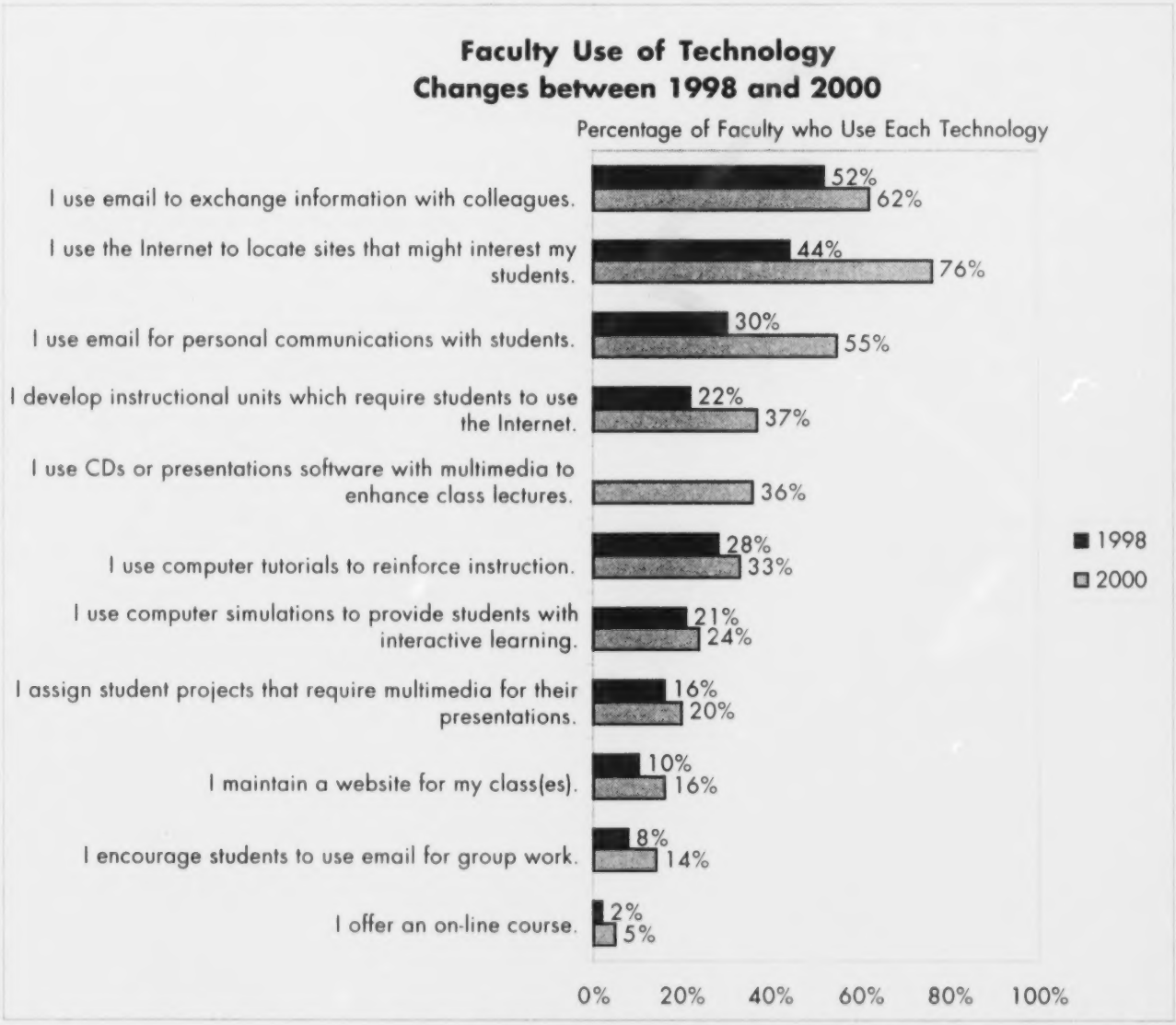


Figure 7. Comparison of the percent of faculty who use technology applications from 1998 and 2000 surveys.

Faculty Self-Reported Skill Levels

Faculty skills have increased in Internet related applications, but have not significantly increased in other areas. The chart below indicates the percentage of faculty that report they have proficient skills in each of the applications of technology. When the percentage reporting both adequate and proficient skills are combined (the detail on use and skill is in Appendix A, page 23), the percentage appears high compared to the percent who *use* the technology. It is possible that some of those who rated their skills as adequate "don't know what they don't know" since they are not actually using the technology application. In any case, the high percentages indicating at least adequate skill suggest that a lack of skill is not the only reason that faculty do not use many of these technology applications. Other impediments to their using the technology such as lack of time for development, lack of technical support or access to equipment may be additional contributing factors.

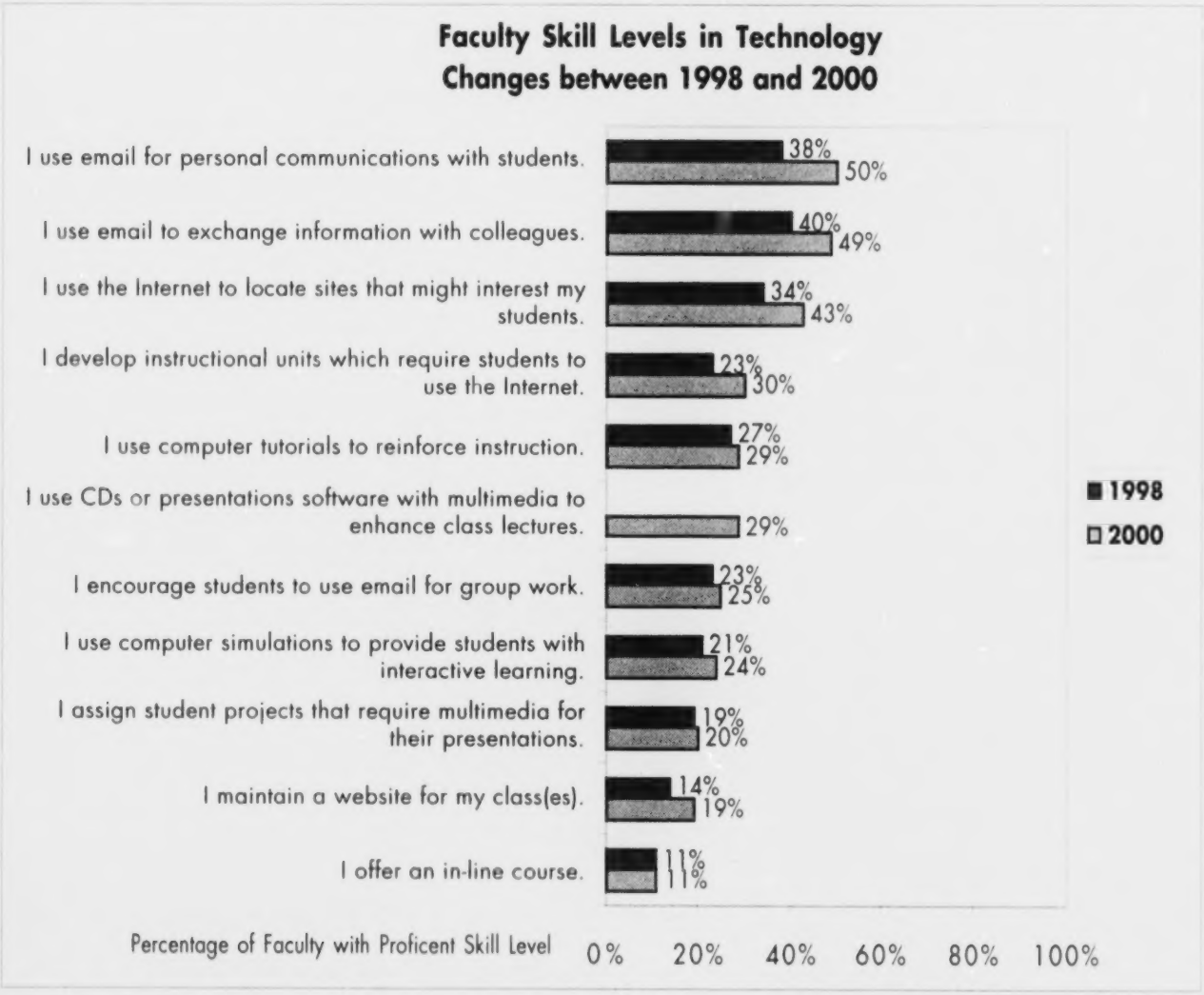


Figure 8. Comparison of the percent of faculty who use technology applications from 1998 and 2000 surveys.

Use of Good Instructional Practices

Though technology use has increased, a significant percentage of faculty do not use applications documented as effective ways to implement good practices in publications such as the Academic Senate's *Guidelines for Good Practice: Technology Mediated Instruction*. Currently, faculty use remains low in many of the applications that enhance instruction. For instance, although many of the good practices have students actually using the technology (multimedia presentations and email for group work), faculty don't use these practices.

Our findings suggest that there are a combination of reasons why a faculty member doesn't use a technology, including concerns for student access to technology, a lack of skills or understanding of the potential of using an application to promote student outcomes, and lack of experience or support in developing curriculum and managing the implementation. The system needs a comprehensive approach addressing each of the issues to increase usage in any of the technology applications promoting good practice.

Implications for training content include a need to focus on how to match technology tools *and* new teaching strategies to objectives and expected learning outcomes, including the pedagogical advantages of a particular technology. Faculty who take a student-centered approach to teaching may be more comfortable in putting technology into the hands of students. Training also needs to address the logistics of integrating the technology and managing the implementation.

Survey Item	Use	Good Practices Addressed
I use computer simulations to provide students with interactive learning environments and/or problem solving opportunities.	24%	•Promotes active learning •Provides prompt feedback •Respects diverse talent and modalities •Communicates high expectation •Promotes quality time on task *Can be designed to:* •Develop reciprocity among students •Provide effective contact between teacher and student
I assign students' projects that require the integration of multimedia for their presentations.	20%	•Promotes active learning •Respects diverse talent and modalities •Communicates high expectation promotes quality time on task *Can be designed to:* •Effective contact between teacher and student •Develop reciprocity among students Provide prompt feedback

Survey Item	Use	Good Practices Addressed
I develop instructional units that require students to use the Internet.	37%	•Promotes effective contact between teacher and student •Promotes active learning •Provides prompt feedback •Communicates high expectation *Can be designed to:* •Respect diverse talent and modalities •Develop reciprocity among students •Provide quality time on task
I encourage students to use e-mail for group work.	14%	•Promotes active learning •Provides prompt feedback •Communicates high expectation •Develops reciprocity among students *Can be designed to:* •Provide quality time on task
I use e-mail for personal communication with students.	55%	•Promotes effective contact between teacher and student •Promotes active learning •Provides prompt feedback *Can be designed to:* •Respect diverse talent and modalities •Provide quality time on task
I use computer tutorials to reinforce instruction.	33%	•Promotes active learning •Provides prompt feedback •Promotes quality time on task *Can be designed to:* •Respect diverse talent and modalities •Effective contact between teacher and student
I use CDs or presentation software which incorporates video, graphics or animation to make class lectures more interesting.	36%	•Promotes effective contact between teacher and student *Can be designed to:* •Encourage active learning •Respect diverse talent and modalities •Develop reciprocity among students •Provide quality time on task

Figure 9. Faculty use of instructional technology applications based on good practices. This chart represents our attempt to organize our data on use based on the potential for good practice cited in the Academic Senate's "Guidelines for Good Practice," and the interviews that were conducted during the 1998 needs assessment.

Training Interests

Faculty were asked about their interest in attending training on a number of technology topics. The results confirm earlier findings that faculty are interested in attending training in how to use technology to improve instruction and student learning. Faculty are interested in training that @ONE has developed such as creating instructional web sites and multimedia presentations, and integrating simulations. Faculty are also highly interested in learning how to assess the effectiveness of instructional technology.

Overall, there is a high interest in training, perhaps epitomized by the fact that there were only 5% of faculty respondents who currently teach an online class, but 46% who would be interested in learning how to convert a course they currently teach to an online course. However, it is important to note here that this also could indicate faculty interest in developing web-supplemented and hybrid courses (in which a course is conducted partially online and partially face-to-face).

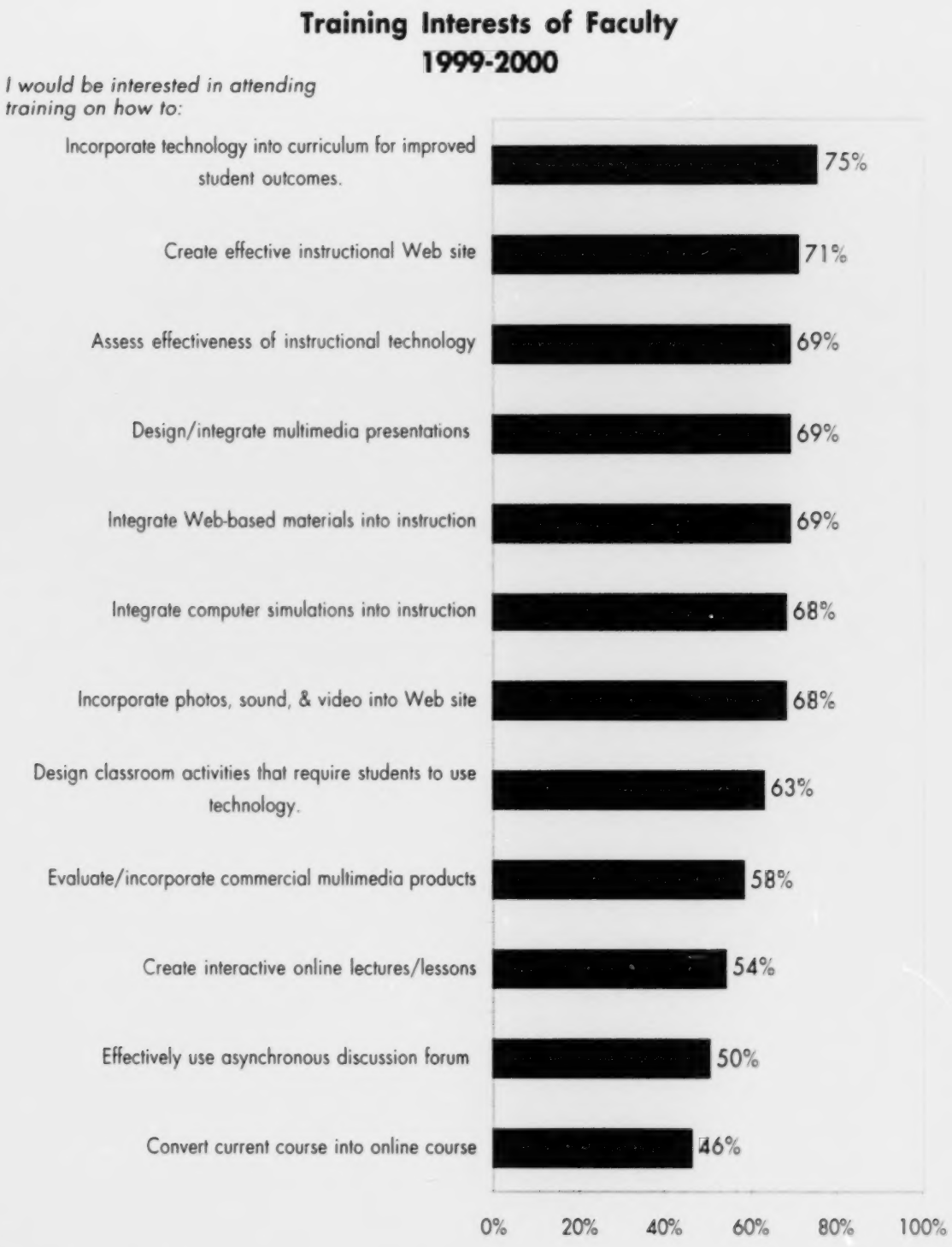


Figure 10. Percent of faculty interested in attending training, presented from highest to lowest interest. Training topics are abreviated here. Complete survey items can be seen in Appendix C in the survey instrument.

Training Frequently Available on Campuses

Overall, skills training in basic software applications is available to a large percentage of faculty, with Microsoft office applications and email and Internet training being most prevalent. Training that focuses on promoting good practice in instruction is apparently least available. This suggests that in addition to procedural training in using technology tools, colleges need to also provide faculty with training focused on how to use technology specifically for the purpose of enhancing instruction. The training available in 2000 is consistent with the training available in 1998, with a very slight increase in office applications and Internet and email training.

"Don't know" was a relatively high response, ranging from 19%-43% with part-time faculty being a large percentage of this group. This suggests that training opportunities are not effectively advertised on campuses especially to adjunct faculty.

Figure 11. Percent of faculty indicating that training in the stated technology is frequently available to faculty and staff at their community college campus.

Training Delivery Preferences of Faculty

Faculty most preferred hands-on training that requires development of a relevant product such as a web site or an instructional unit incorporating technology. This preference has increased in the last two years, even surpassing one-on-one coaching by a colleague, which was more preferred in 1998. The data suggests that live, hands-on training tailored to discipline groups would be of high interest.

Online training and training via videoconference remain low preferences for faculty at about the same levels as 1998. Both of these delivery options would allow for central statewide delivery to large numbers, a highly scalable approach to training. However, the data suggests that supporting local structures for training delivery would be most effective in reaching the most faculty.

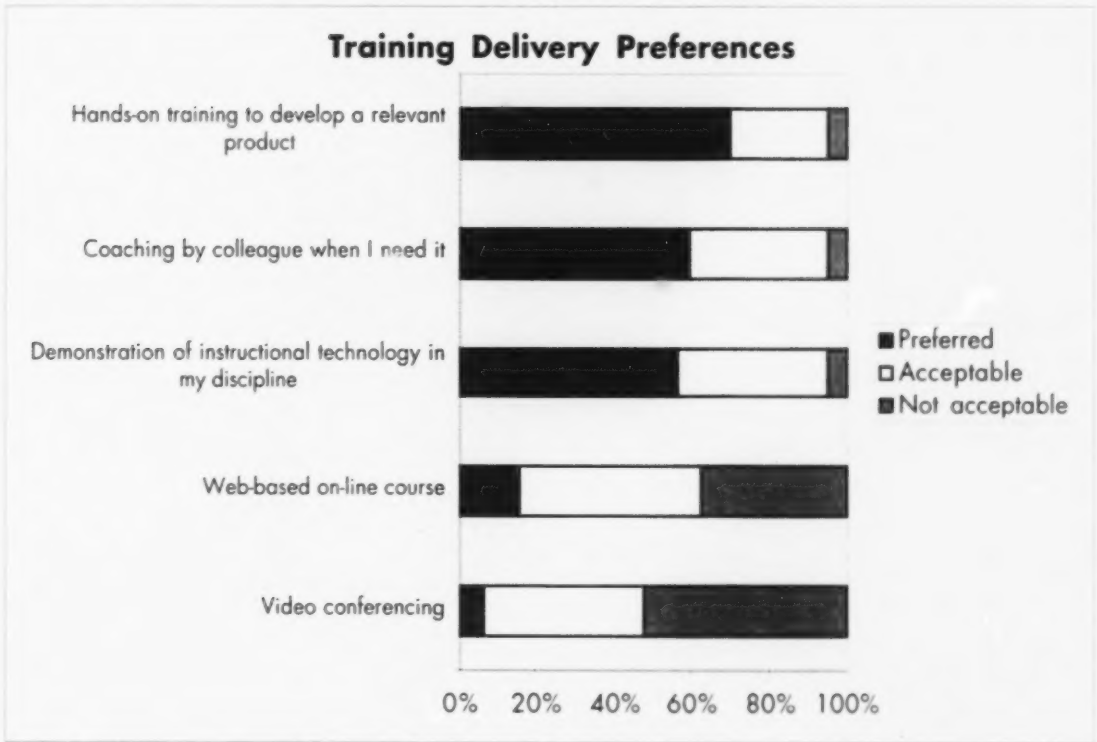


Figure 12. Faculty preferences regarding training methodology. Bar indicates preferred, acceptable and not acceptable responses.

Training Logistics and Follow-Up

In 1998, we learned that faculty preferred half day to full day training sessions. In this more current data, we see that faculty have a slightly higher preference for even shorter training sessions. This supports what we had heard informally from campus trainers. Again the implications are that an effective statewide strategy would be to support local training delivery designed in modules, which are adaptable based on faculty needs.

An online discussion group as a means to follow-up on training is growing in acceptability among faculty, though 24% would find it unacceptable.

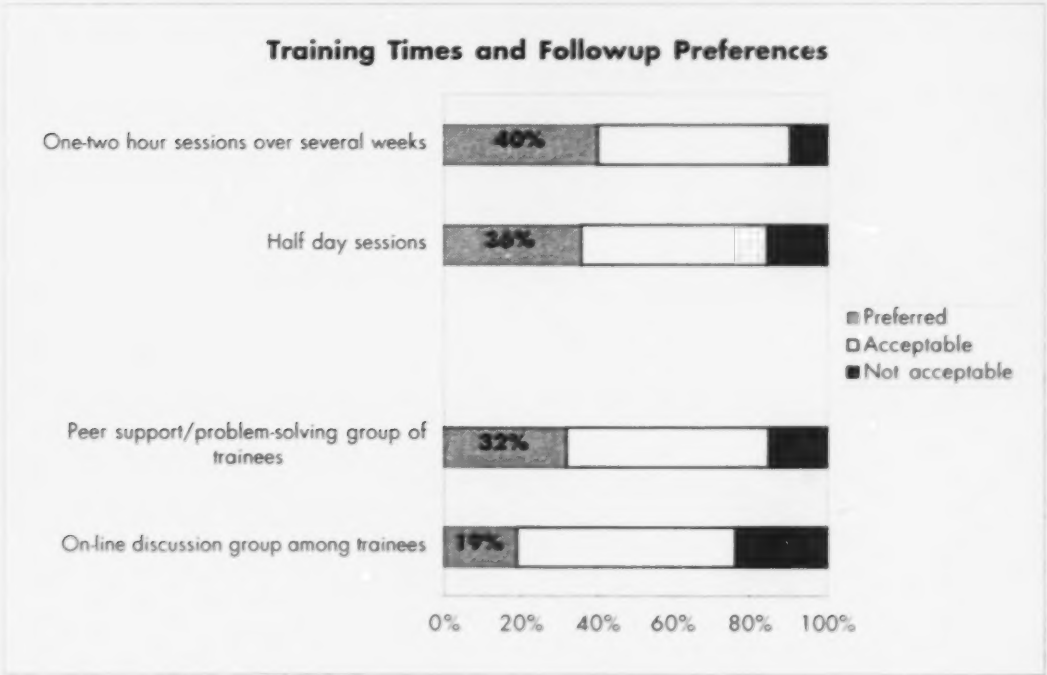


Figure 13. Percent of faculty indicating preferences for training schedule and follow-up support. Bar indicates preferred, acceptable and not acceptable responses.

Implications for Statewide Strategy

The results from the @ONE Instructional Technology Survey, 2000, confirm that @ONE's approach to supporting technology integration by developing training materials and resources for the local campuses is on target. The strategy articulated in the 1998-99 Training Plan, to disseminate live training on how to use technology effectively in instruction, will be continued. New development will reflect high interest topics and needs uncovered in this research. Because of the greater use of the Internet, the increase in interest of learning how to teach online and the modest increase in acceptance of online training, @ONE will convert training courses to an online mode as an *additional* delivery option for individual faculty.

Appendix A
Selected Tables

Faculty Attitudes Regarding Technology

To what extent do you think that the use of technology will:	Percentage who feel this is true			
	Much or very much	Some what	Not at all	No opinion
enable community colleges to reach more students?	76%	22%	1%	1%
improve teaching and learning in higher education?	71%	27%	1%	0%
enable you to provide your students with individualized feedback?	57%	31%	9%	3%
enable you to design activities that increase students' ability to analyze, use, and apply information to new situations?	56%	34%	7%	3%
enable you to design activities that increase students' retention of information?	54%	36%	8%	3%
enable you to address individual student interests more effectively?	52%	38%	8%	2%
enable you to address the different learning styles of your students more effectively?	51%	39%	8%	2%

Figure 14. Faculty perceptions of the impact of technology in descending order of percent of faculty rating much, or very much.

Faculty Appraisal of Access and Support for Instructional Technology, 2000

At my college:	Agree	Disagree	Do not know
Computers sufficient for faculty needs (including Internet access) are available in faculty offices.	58%	32%	11%
Students' lack of access to appropriate equipment is an impediment to my ability to integrate technology into classes.	47%	40%	14%
Equipment necessary for multimedia presentations is available for use in classrooms.	45%	45%	11%
There is sufficient technical computer support available to meet faculty needs.	42%	46%	12%
There are a sufficient number of computers in classrooms & computer labs to meet student needs.	38%	49%	13%
I have access to an instructional designer, instructional technologist, or curriculum expert who can advise me on the use of technology to achieve desired student outcomes.	37%	42%	21%
As a faculty member I can receive release time and/or compensation to attend technology training.	34%	32%	34%
Instructors receive release time, flex credit and/or compensation to develop on-line courses.	26%	33%	42%
My department has an adequate budget to purchase software which enhances instruction.	21%	51%	28%
Faculty are compensated for time spent in developing and incorporating technology into their curriculum.	11%	55%	34%

Figure 15. The survey items are listed in descending order of the percentage of faculty who agreed with the Statement.

Faculty Use of Technology and Skill Levels

	Use	Skill Level		
		Minimal	Adequate	Proficient
I use email to exchange information with colleagues.	76%	14%	38%	49%
I use the Internet to locate Web sites that might be of interest to my students.	62%	20%	37%	43%
I use email for personal communications with students.	55%	16%	34%	50%
I develop instructional units which require students to use the Internet.	37%	34%	36%	30%
I use CDs or presentation software which incorporates multimedia such as audio, video, graphics, or animation to make class lectures more interesting.	36%	38%	33%	29%
I use computer tutorials to reinforce instruction.	33%	36%	35%	29%
I use computer simulations to provide students with interactive learning environments and/or problem solving opportunities.	24%	50%	26%	24%
I assign student projects that require the integration of multimedia for their presentations.	20%	46%	33%	20%
I maintain a web site for my class(es)	16%	61%	20%	19%
I provide activities that encourage my students to use E-mail for group work.	14%	41%	33%	25%
I offer an on-line course	5%	75%	14%	11%

Figure 16. Faculty self assessment of use and skill level in technology applications, in descending order of use.

Appendix B
College Sample

Participating Community Colleges

Butte College
College of the Canyons
College of Marin
De Anza College
East Los Angeles College
Fresno Fresno City College
Hartnell College
Las Positas College
Long Beach City College
Los Angeles Trade-Tech College
Mt San Jacinto College
Napa College
Santa Barbara City College
Santa Monica College
Santa Ana College
San Diego Miramar College
Shasta College
Southwestern College
West Valley College
Yuba College

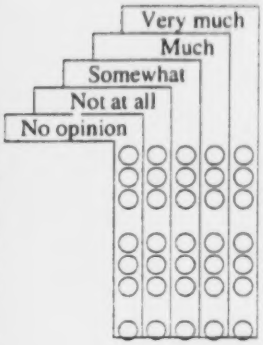
Campus Contacts

Our thanks to the campus contacts for the survey implementation:
Roberta Baber, *Fresno City College*
Michael Bertsch and Claudine Franquet, *Butte College*
Judith Bornholdt, *Southwestern College*
Richard Thomas-Bremer and Sue Borer, *Napa Valley College*
Linda Delzeit, *LA Trade-Tech College*
Marlene Demerjian, *College of the Canyons*
Patricia Demo, *Shasta College*
LaBecca Doyle, *Mt. San Jacinto College*
Mary Ellen Eckhert, *East LA College*
John Flaherty, *Yuba College*
Kathleen Kirkpatrick, *College of Marin*
Vivian Lock, *West Valley College*
Ric Matthews, *San Diego Miramar*
Jennifer Merlic, *Santa Monica College*
Jody Millward, *Santa Barbara City College*
Jacque O'Lea, *Santa Ana College*
Sallie Savage, *Hartnell College*
Francis Shelby, *Long Beach City College*
Scott Vigallon, *Las Positas College*
Marjorie West, *De Anza College*

@One Instructional Technology Survey

Appendix C

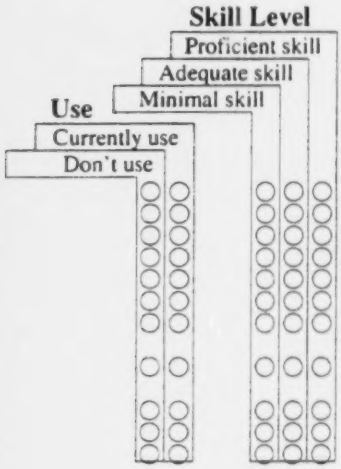
Instructions: Please use a #2 pencil and fill bubbles completely.



Impact on Teaching and Learning

To what extent do you think that:

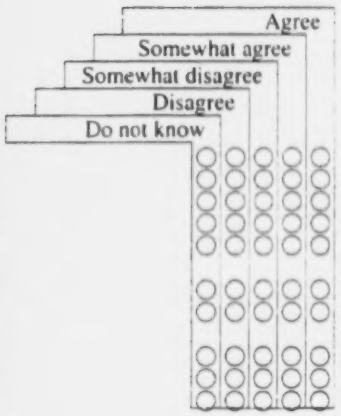
1. technology will improve teaching and learning in higher education?
2. the use of technology will enable community colleges to reach more students?
3. the use of technology will enable you to address the different learning styles of your students more effectively?
4. the use of technology will enable you to address individual student interests more effectively?
5. the use of technology will enable you to design activities that increase students' retention of information?
6. the use of technology will enable you to design activities that increase students' ability to analyze, use, and apply information to new situations?
7. the use of technology will enable you to provide your students with individualized feedback?



Use and Skill Level

Indicate both your use and your skill level

8. I use e-mail to exchange information with colleagues
9. I use e-mail for personal communications with students
10. I provide activities that encourage my students to use e-mail for group work
11. I maintain a Web site for my class(es)
12. I develop instructional units which require students to use the Internet
13. I use the Internet to locate Web sites that might be of interest to my students
14. I use computer simulations to provide students with interactive learning environments and/or problem solving opportunities
15. I use CDs or presentation software which incorporate multimedia such as audio, video, graphics or animation to make class lectures more interesting.
16. I assign student projects that require the integration of multimedia for their presentations
17. I use computer tutorials to reinforce instruction
18. I offer an on-line course



Access and Support

At my college:

19. there are a sufficient number of computers in classrooms and computer labs to meet student needs.
20. computers sufficient for faculty needs (including Internet access) are available in faculty offices.
21. equipment necessary for multimedia presentations is available for use in classrooms.
22. there is sufficient technical computer support available to meet faculty needs.
23. I have access to an instructional designer, instructional technologist or curriculum expert who can advise me on the use of technology to achieve desired student outcomes.
24. instructors receive release time, flex credit and/or compensation to develop on-line courses.
25. faculty are compensated for time spent in developing and incorporating technology into their curriculum.
26. as a faculty member I can receive release time and/or compensation to attend technology training.
27. my department has an adequate budget to purchase software which enhances instruction
28. students' lack of access to appropriate equipment is an impediment to my ability to integrate technology into classes.

Over, please

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Training

The following training is frequently available to faculty and staff on my campus:

	Yes	No	Don't know
29. How to use the Internet and email	○	○	○
30. How to use Microsoft Office applications such as Word, Excel and PowerPoint	○	○	○
31. How to incorporate technology into my curriculum for improved student outcomes	○	○	○
32. How to incorporate multimedia resources into class lectures	○	○	○
33. How to develop an effective instructional Web site	○	○	○
34. How to develop and teach an online course	○	○	○
35. How to use applications/programs specific to my discipline	○	○	○

I would be interested in attending training on:

	Yes	No	Don't know
36. How to incorporate technology into my curriculum for improved student outcomes.	○	○	○
37. How to design and integrate multimedia presentations, using PowerPoint, CD clips and video into my classroom instruction.	○	○	○
38. How to evaluate and incorporate commercial multimedia products into my instruction.	○	○	○
39. How to design classroom activities that require students to use various technology tools in completing their assignments.	○	○	○
40. How to integrate computer simulations specific to my discipline into classroom instruction.	○	○	○
41. How to find and integrate Web-based materials appropriate to my discipline into my instruction.	○	○	○
42. How to create an effective instructional Web site.	○	○	○
43. How to incorporate photographs, sound and video into my instructional Web site.	○	○	○
44. How to effectively use an asynchronous (posted at different times) discussion forum or message board with my students.	○	○	○
45. How to create interactive online lectures and lessons for my students.	○	○	○
46. How to convert a course I currently teach into an on-line course.	○	○	○
47. How to assess the effectiveness of my use of instructional technology in reaching my course objectives.	○	○	○

Please rate the following training delivery options in terms of your preference:

	Preferred	Acceptable	Unacceptable
48. Hands-on training that requires development of a relevant product, such as a Web site, an instructional unit incorporating technology, etc.	○	○	○
49. Demonstration or training on effective uses of instructional technology specific to my discipline	○	○	○
50. Coaching by a mentor/colleague/expert when I need it	○	○	○
51. Training via a Web-based on-line course	○	○	○
52. Training via video conferencing	○	○	○
53. Half day sessions	○	○	○
54. One-two hour sessions scheduled over several weeks of time	○	○	○
55. Peer support/problem-solving group as follow-up after training	○	○	○
56. Follow-up, on-line discussion group with others who also attended training	○	○	○

Background Information

57. What is your current faculty status? ○ Full-time ○ Part-time

58. What is your gender? ○ Female ○ Male

59. What is your ethnic background? ○ Black, not Hispanic ○ Hispanic ○ American Indian ○ Asian, Pacific Islander ○ White, not Hispanic ○ Other

60. What is your age? ○ Under 35 ○ 36-50 ○ 51+

61. Discipline: (please choose one)

○ Applied Technologies ○ Basic Skills/ESL ○ Biological and Health Sciences
○ Business and Computer Applications ○ Child Devlopment, Education ○ Counseling
○ Creative Arts ○ Foreign Languages ○ Language Arts
○ Math and Computer Science ○ Physical Education, Athletics ○ Physical Sciences
○ Social Sciences ○ Vocational Studies ○ Other

62. Do you have a computer with Internet access at home? ○ Yes ○ No ○ No, but I intend to buy one

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